

IN THE SPECIFICATION

Please amend the paragraph at page 6, lines 5-28 as follows:

B1  
The term "pressure generator" as used in this application means a primary element (e.g., an orifice plate, a pitot tube, a nozzle, a venturi, a shedding bar, a bend in a pipe or other flow discontinuity adapted to cause a pressure drop in flow) together with impulse pipes or impulse passageways that couple the pressure drop from locations near the primary element to a location outside the flow pipe. The spectral and statistical characteristics of this pressure presented by this defined "pressure generator" at a location outside the flow pipe to a connected pressure transmitter 82 102 can be affected by the condition of the primary element as well as on the condition of the impulse pipes. The connected pressure transmitter can be a self-contained unit, or it can be fitted with remote seals as needed to fit the application. A flange on the pressure transmitter 102 (or its remote seals) couples to a flange adapter on the impulse lines 104 to complete the pressure connections in a conventional manner. The pressure transmitter 102 couples to a primary flow element 106 via impulse lines 104 to sense flow. Primary element 106, as illustrated, is an orifice plate clamped between pipe flanges 105.

Please amend the paragraph from page 25 line 7 to page 26, line 7 as follows:

B2✓  
FIG. 11 is a block diagram of a discrete wavelet transformation. FIG. 11 illustrates an example in which an original set of digital pressure data or signal S is decomposed using a sub-band coder of a Mallet algorithm. The signal S has a frequency range from 0 to a

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end  
maximum of  $f_{MAX}$ . The signal is passed simultaneously through a first high pass filter 250 having a frequency range from  $1/2 f_{MAX}$  to  $f_{MAX}$ , and a low pass filter 252 having a frequency range from 0 to  $1/2 f_{MAX}$ . This process is called decomposition. The output from the high pass filter provides "level 1" discrete wavelet transform coefficients 254. The "level 1" coefficients 254 represent the amplitude as a function of time of that portion of the input signal which is between  $1/2 f_{MAX}$  and  $f_{MAX}$ . The output from the 0 -  $1/2 f_{MAX}$  low pass filter 252 is passed through subsequent high pass ( $1/4 f_{MAX}$  -  $1/2 f_{MAX}$ ) filter 256 and low pass (0 -  $1/4 f_{MAX}$ ) filter 258, as desired, to provide additional levels (beyond "level 1") of discrete wavelet transform coefficients. The outputs from each low pass filter can be subjected to further decompositions offering additional levels of discrete wavelet transformation coefficients as desired. This process continues until the desired resolution is achieved or the number of remaining data samples after a decomposition yields no additional information. The resolution of the wavelet transform is chosen to be approximately the same as the sensor or the same as the minimum signal resolution required to monitor the signal. Each level of DWT coefficients is representative of signal amplitude as a function of time for a given frequency range. Coefficients for each frequency range are concatenated to form a graph such as that shown in FIG. 10.

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